

DESIGN GUIDELINES

USAREUR - Restoration Program of Troop Billets - Standard 1+1

		SOURCE	
B 10	WATER, SEWAGE SYSTEMS	1110-3-1	B 01
B 10.1	Standards and Guidelines		B 02
The design shall be based upon German standards and guidelines.			B 03
B 10.2	Identification		B 04
All equipment and piping shall be identified with laminated presswood signs with permanently engraved lettering in German and English.			B 05
Function schematics of built-in system, permanently protected, CAD-quality (computer-aided-design) shall be posted in central mechanical plants.			B 06
B 10.3	Water supply		B 07
B 10.3.1	Water quality		B 08
No water softening system shall be installed.			B 09
B 10.3.2	Disinfection		B 10
The disinfection of drinking water system shall be acc. to EUD work sheet 1110-3-1.			B 11
The requirements of this guidelines are listed as follows.			B 12
The entire water distribution system shall be degerminated. The determination agent shall consist either of a solvent of liquid chlorine, liquid sodium hypochlorite, chlorinated lime or high quality (dry) calcium hpyochlorite). The minimum concentration of chlorine shall not be less than 50 ppm (50 g/cbm).			B 13
The solvent shall be inserted into the distribution system in such a manner which allows an exact measurement of chlorine, guarantees a uniform mixture and takes care that the disinfection solvent is in contact with the surface for a sufficient long period.			B 14
The used method shall be approved by the contract authority or an authorized representative.			B 15
The sterilization solvent shall remain in system for a period of 24 hours.			
The chlorine residue after 24 hours shall not be less than 10 ppm (10 g/cbm).			
All valves and built-in parts shall be set into operation during the contact period.			
The system shall be flushed with clear water after sterilization until the free chlorine residue is less than 1 ppm (1 g/cbm).			
Bacteriological investigations to coliform organism shall be accomplished at the local medical service prior to taking the drinking water system into operation.			
If the test proofs the existence of coliform organism, the sterilization shall be repeated.			
Warning signs with lettering "NO DRINKING WATER" in German and English shall be erected at each tapping point during sterilization.			

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SOURCE		
<p>Proofs concerning the degermination shall be submitted in triplicate to the local administration at inspection of a project.</p> <p>An updated version of Work Sheet EUDM 1110-3-1 shall be requested at the local community administration prior to commencement of design.</p>		B 01
		B 02
<p>B 10.3.2.1 Allowance acc. to NSF 61 The fittings of dishwashing sinks in kitchens and in kitchenettes as well as water faucet for drinking fountain/cooler shall be accomplished with fittings having an allowance acc. to NSF 61.</p> <p>The certificate concerning a certification acc. to NSF 61 shall be requested at the manufacturer of fittings prior to commencement of work.</p>	NSF 61	B 03
		B 04
<p>B 10.3.3 Selection of Pipe Materials Basement / Escape Routes Only incombustible construction materials acc. to construction material class A 1 acc. to DIN 4102 shall be used in basement and/or in escape and rescue routes. Pipes made of non-rusting chrome-nickel-molybdenum steel (Cr-Ni-Mo-steel) acc. to DIN 17455 shall be used in the corridor of basement.</p> <p>Lines in corridors of full floors shall be accomplished same as connection lines.</p> <p>A certificate concerning quality of being recognized as safe for the disinfection acc. to conditions named under item B 10.3.2 as well as for the operation under permanent chlorinating acc. to local conditions shall be obtained from the manufacturer of pipe prior to commencement of design. The concentration of free chlorine during standard operation depends on the location and shall be therefore inquired at the local community administration prior to commencement of design.</p> <p>Furthermore, the corrosion behavior of used valves and built-in parts under consideration of disinfection and/or permanent chlorinating shall be observed.</p>	DIN 4102	B 05
		B 06
	DIN 17455	B 07
		B 08
<p>Risers Following pipe materials can be used for the risers:</p> <ol style="list-style-type: none"> 1. Pipes made of non-rusting chrome-nickel-molybdenum steel 2. Pipes made of PVC-C acc. to DIN 8079 RR7 and/or EN 1545 wi 026 3. Pipes made of metal composite material with PE-XB interior pipe, aluminum metal core and PE-HD exterior protective layer 4. Pipes made of polypropylene PP 	DIN 17455 DIN 8079	B 09
		B 10
<p>Connection lines / single connection lines Following pipe materials can be used for the lines within rooms:</p> <ol style="list-style-type: none"> 1. Pipes made of non-rusting chrome-nickel-molybdenum steel 2. Pipes made of PVC-C acc. to DIN 8079 RR7 and/or EN 1545 wi 026 3. Pipes made of metal composite material with PE-XB interior pipe, aluminum metal core and PE-HD exterior protective layer 4. Pipes made of polypropylene PP 	DIN 17455 DIN 8079	B 11
		B 12
		B 13
		B 14
		B 15

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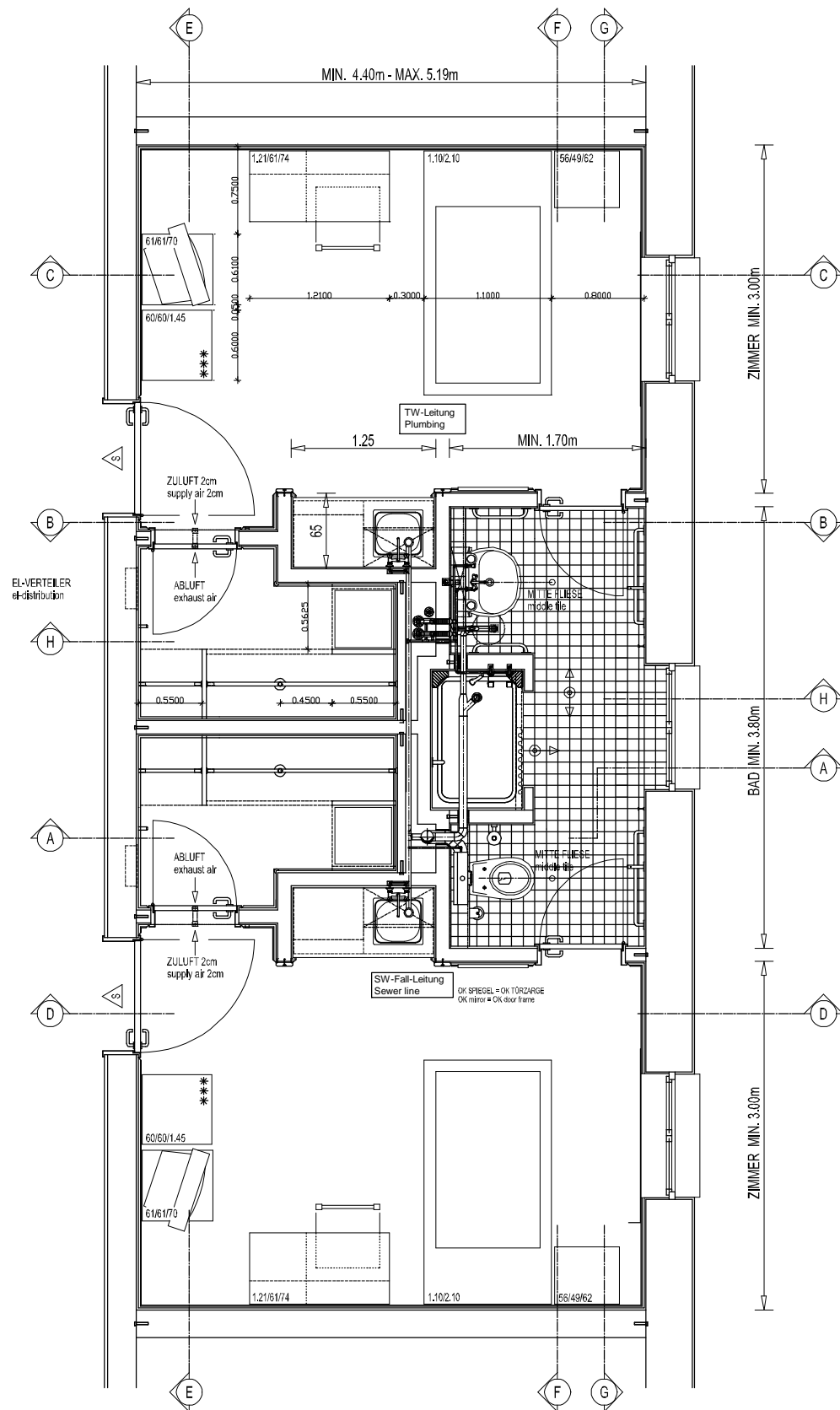
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SOURCE	
The selection of pipe material shall be made in coordination with the local DPW under consideration of material already used at the site as well as available space conditions.	B 01
The selection of pipe material shall be confirmed by the local administration.	B 02
Shut-off fittings Only fittings made of red brass RG5 shall be used due to increased corrosion potential. Fittings made of dezinc resistant brass are not allowed.	B 03
B 10.3.4 Pipe routing Distribution lines shall be properly routed underneath the ceiling. No lines shall be routed underneath the ceiling in bedrooms. It is important to use a uniform fastening method for all mechanical building elements. Risers shall be flush mounted. If this is not possible, they shall be surface mounted . The maximum distance between finished wall surface and rear edge pipe is 3 cm.	B 04
Connecting pipes shall be installed concealed. If this installation is not feasible, the above mentioned method shall be used.	B 05
In case of wall/ceiling penetrations, piping shall be separated from the structure with reference to sound transmission; fire protection requirements shall be observed.	B 06
Line guide bathroom / bedrooms Possible line guides within the rooms are shown in fig. 10.3.4 – 1 up to 10.3.4 – 5.	B 07
Riser shut-off All risers shall be provided with shut-off fittings. The risers shall be drainable.	B 08
Shut-offs of bathroom units The bathroom units shall be separately shut-off at more than two dwelling floors. The shut-off shall be accomplished via flush mounted valve in supply manhole.	B 09
Shut-offs of kitchen units Kitchens with own riser will be provided with separate shut-off valves. The shut-off shall be accomplished via flush mounted valve in supply manhole.	B 10
Lines through stairwells Possibly no lines shall be led through stairwells. If it is absolutely required, appropriate fire protection measures shall be accomplished.	B 11
Identification signs All shut-offs shall be identified. The identification shall be fastened either via tension lock at pipe or fitting, or a sheet metal sign shall be fastened to the fitting via small link chain. Stick-on of identification to insulation is not allowed.	B 12
The identification of shut-offs shall allow a reference to the inspection documents.	B 13
	B 14
	B 15

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Fig 10.3.4 - 1 Example layout type 1



B 01

B 02

B 03

B 04

B 05

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B 13

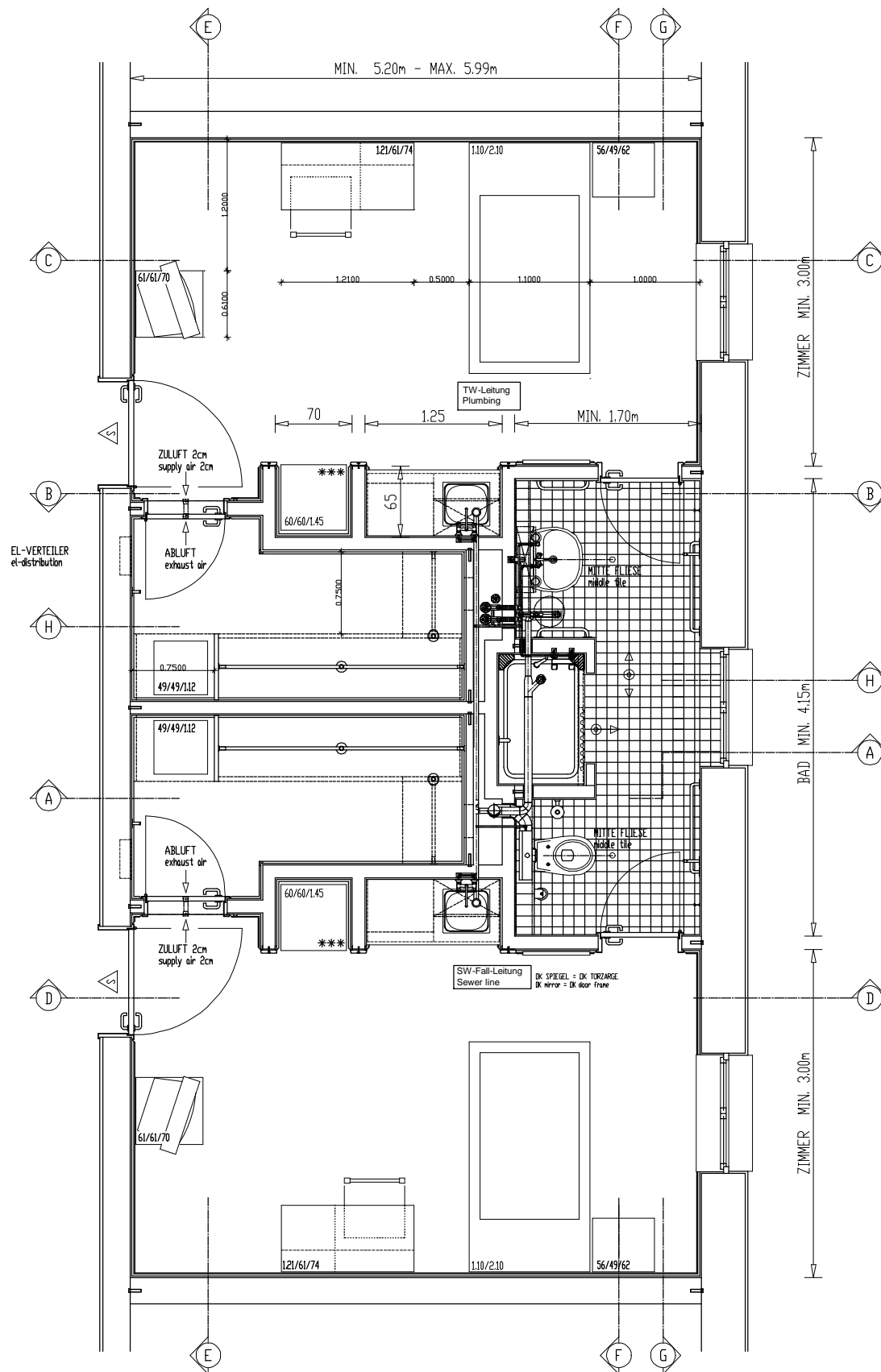
B 14

B 15

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Fig 10.3.4 – 2 Example layout type 2



B 01

B 02

B 03

B 04

B 05

B 06

B 07

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B 09

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B 11

B 12

B 13

B 14

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STANDARDGRUNDRISS AB 6,00m

ZIMMER MIN. 4.30m

SCHRANKR. MIN. 1.55m

121/61/74

56/49/62

110/210

49/49/112

ZULUFT 2cm
supply air 2cm

ABLUF 2cm
exhaust air 2cm

DK SPIGEL = DK TURZARGE
DK mirror = DK door frame
61/115

SW-Leitung in Zwischendecke
Sewer line in suspended ceiling

TW-Leitung
Plumbing

61/61/70

61/115

60/60/145

EL-VERTEILER
el-distribution

ZULUFT 2cm
supply air 2cm

ABLUF 2cm
exhaust air 2cm

121/61/74

56/49/62

110/210

49/49/112

MIN. 0.90m

65

70

1.25

1.25

1.50m

3.10m

1.80m

3.10m

BAD MIN

ZIMMER MIN.

SCHRANKR. MIN.

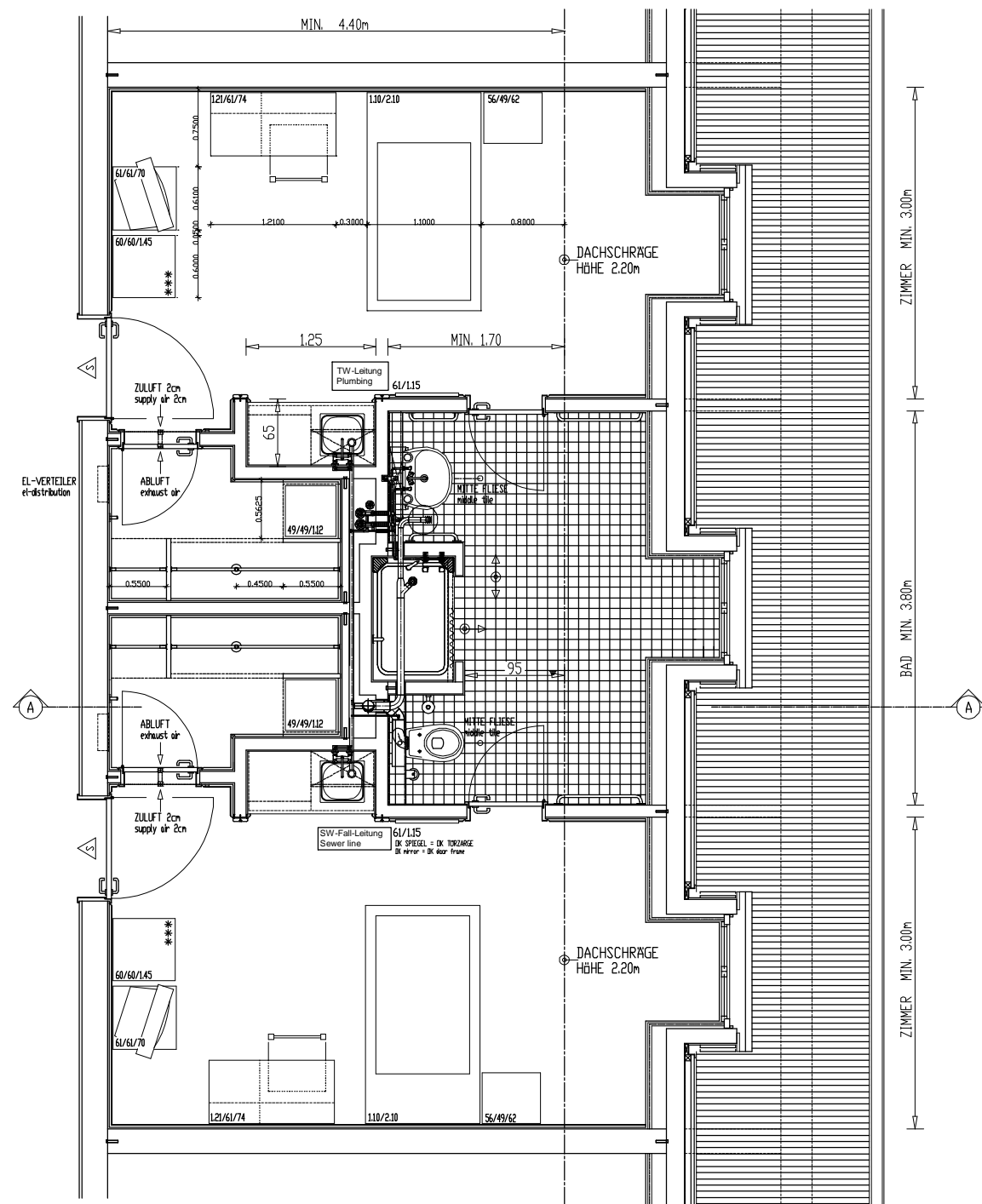
AB 6,00m

B 15

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Fig 10.3.4 – 4 Example layout type 4



B 01

B 02

B 03

B 04

B 05

B 06

B 07

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B 09

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B 11

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B 13

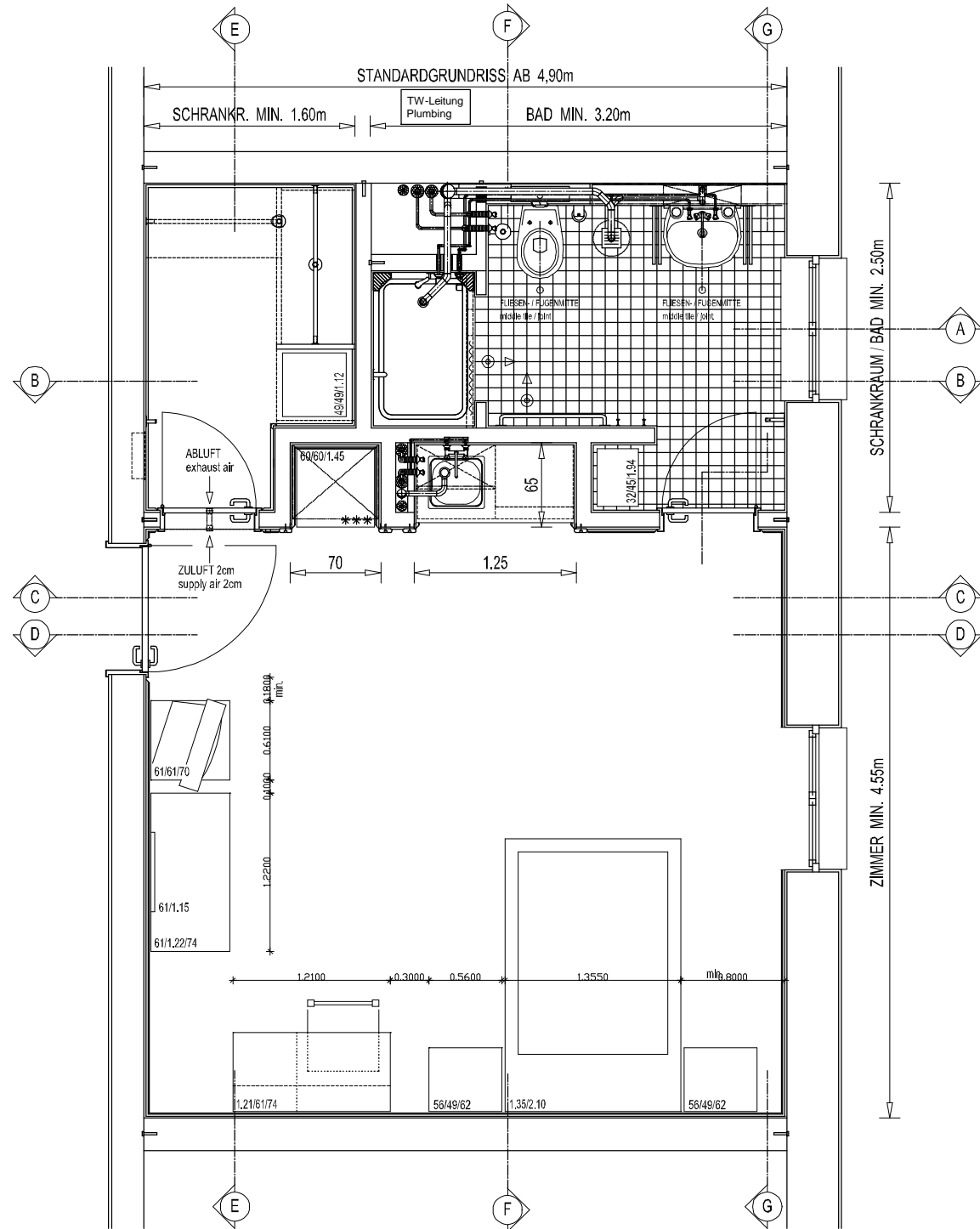
B 14

B 15

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Fig 10.3.4 – 5 Example layout type 5



B 01

B 02

B 03

B 04

B 05

B 06

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		SOURCE	
B 10.3.5 Warm water generation Central warm water supply shall be provided in the building. ETL-1110-3-489 is the basis for the dimensioning of warm water generation. A description of calculation process acc. to ETL-1110-3-489 is in chapter B 11.		DIN 1988 ETL-1110-3-489	B 01
			B 02
B 10.3.5.1 Warm water mixing station Central warm water pre-mixing shall be provided. System structure as follows: 3-way mixing valves and riser control valves in red brass execution. Installation of riser control valves in hot and cold water supply and in bypass circulation, in order to compensate pressure differences from line network to system. The adjustment of mixed water temperature shall be possible at the system without use of special tool. The responsible DPW shall be instructed in operation of system. An independent working security temperature limiter (STB) shall be superior of control which closes the hot water gate at mixing valves at exceeding temperature failure (emergency function). The used mixed water circulation pump shall be adapted in capacity to the total system. Structure of switch cabinet acc. to VDE 100 with all switch aggregates. The regulation and control of system will be accomplished from this switch cabinet.			B 03
			B 04
			B 05
			B 06
		VDE 100	B 07
Thermal disinfection The mixed water station shall allow a thermal disinfection acc. to legionnaire switching type II. Legionnaire switching type II includes the requirements acc. to legionnaire switching type I; this means, switching via 2 – duct clock to a 2 nd set value temperature (70°C) of mixed water circuit with pump start for heating and pump delayed shut-off for cooling of increased circulation temperature. Further switching of following system parameters to process control technique: 1. Initialization of increased boiler temperature 2. Duration of disinfection			B 08
			B 09
Warm water temperatures: Bathrooms bedrooms 45°C Kitchenettes 45°C Kitchens 45°C Janitor's closet basement 60°C Janitor's closet main floor 45°C Janitor's closet attic 45°C Mud room 60°C Mechanical rooms 45°C Laundry room – service sink 45°C Laundry room – washing machines 60°C Latrines female male 45°C			B 10
			B 11
			B 12
			B 13
Two separate warm water networks shall be provided.			B 14
			B 15

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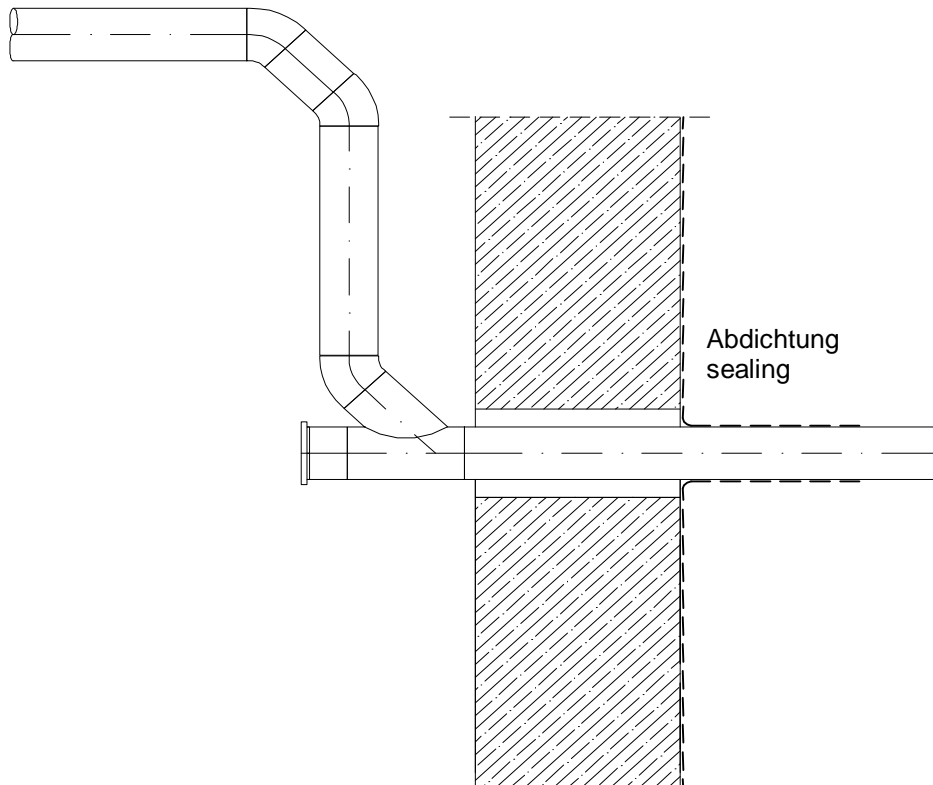
Circulation lines shall be provided. Automatic hydraulic balance of the circulation networks shall be possible. The concerns of the thermal disinfection shall be considered at the selection of compensation fittings.	SOURCE	B 01
		B 02
Trace heating systems are not acceptable.	HeizAnIV	B 03
B 10.3.6 Thermal Insulation All pipelines shall be insulated in accordance with the Heating System Ordinance. Cold water lines shall be protected against condensation formation.		B 04
Thermal insulation in escape and rescue routes shall consist of materials acc. to construction material class A acc. to DIN 4102. Piping in escape routes shall be covered with an additional jacket made of galvanized sheet steel (sheet thickness 0.5 mm).	DIN 4102	B 05
Piping in central mechanical plants shall be covered with an additional jacket of galvanized sheet steel (sheet thickness 0.5 mm).		B 06
Distribution lines in exposed areas outside of escape routes shall be covered with an additional jacket of PVC.	DIN 4102	B 07
Appropriate easily dismantable insulation caps shall be used for fixtures. Insulation materials shall meet the requirements of construction material class A1, A2, B1.		B 08
B 10.3.7 Sound Insulation Requirements	DIN 4109	B 09
Applicable are the guidelines of DIN 4109.		B 10
Sound insulation inlays shall be used for pipe fastening devices. Decoupling of pipes from the structure is important.		B 11
The requirements of fire protection shall be observed at accomplishment of sound insulation measures.		B 12
		B 13
		B 14
		B 15

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		SOURCE	
B 10.4	Sewage Discharge		B 01
B 10.4.1	Selection of pipe materials		
Down and service lines will be of cast iron acc. to DIN 19522.		DIN 19522	
Connection lines will be of plastic of ABS/ASA acc. to DIN 19561		DIN 19561	
or PE acc. to DIN 19535 and/or DIN 19537		DIN 19535	B 02
		DIN 19537	
Ventilation lines will be of plastic acc. to connection lines.			B 03
Ventilation lines shall be insulated against condensation water accumulation.			
B 10.4.2	Pipe Routing		
Down and service lines shall be routed below the basement ceiling and routed directly outside.		DIN 1986	B 04
Horizontal lines in offices and/or storage rooms shall be covered. Installation either on top of suspended ceiling or covered.			
Wall passage shall be performed as per DIN 18 195, as well as in accordance with the codes of practice of sealing product manufacturers. The respective maximum load situation shall be performed.		DIN 18 195	B 05
		Mkbl ZDB	
Accomplishment of wall passage see Fig. 10.4.1 (maximum load non-pressing water shown)			B 06
			B 07
			B 08
			B 09
			B 10
			B 11
			B 12
			B 13
			B 14
			B 15

Fig.10.4.1 Wall passage sewer



Uniform fastening devices shall be used for all mechanical building elements.
Branches with end caps shall be used in case of changes of direction.

Down and service lines shall be installed in shafts together with supply lines.

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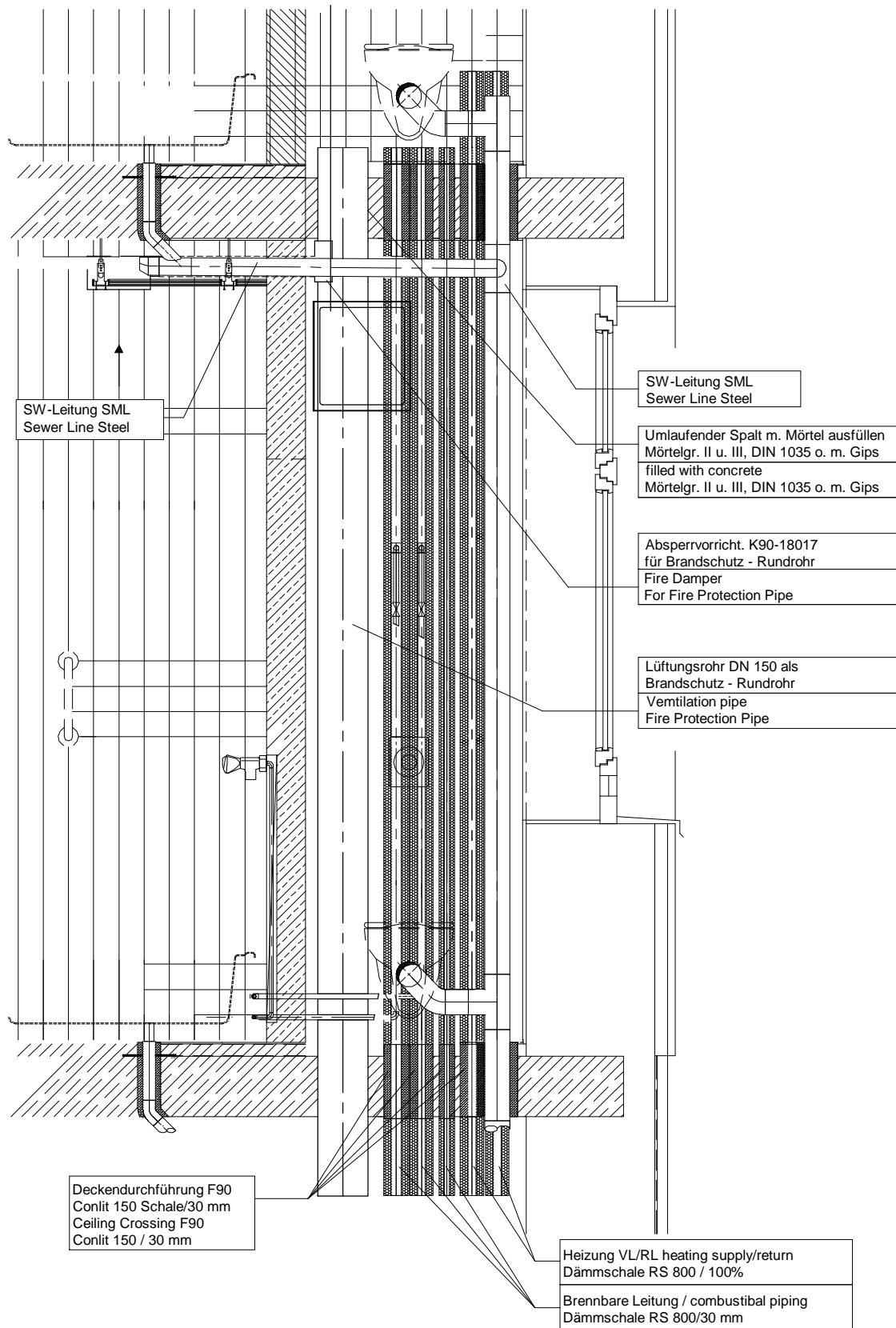
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	SOURCE	
Sewage shall be discharged below the backwash level via one or more sewage lifting plants.		B 01
B 10.4.3 Thermal Insulation The decision, whether sewage lines are to be insulated depends upon selected pipe material and sound insulation values of adjacent walls. The designer has to investigate, whether and in which scope the existing construction necessitates insulation of pipelines.		B 02
Ventilation lines shall be insulated against accumulation of condensation.		B 03
B 10.4.4 Fire Protection Requirements Pipe penetrations through fire sections shall be protected against flame transmission under consideration of DIN 4102, District Construction Ordinance and U.S. requirements. See B 04.	DIN 4102 LBO NFPA B 04	B 04
The dependence between proper accomplishment of ceiling/wall passage acc. to sound insulation guidelines under consideration of fire protection at the same time shall be strictly observed.		B 05
Especially, this means: 1. Openings and/or chases shall be kept as small as possible 2. Remaining openings shall be closed with incombustible construction materials. 3. Required coverings (sound insulation) in the area of openings shall be accomplished with mineral fibers showing a melting temperature of min. 1000°C. 4. The flush mounted installation of remaining rest wall thickness at staircases and fire sections shall reconstruct the fire resistance class of construction element.		B 06
		B 07
		B 08
A possible manhole accomplishment at use of fire protection pipe shows Fig. 12.4.2		B 09
		B 10
		B 11
		B 12
		B 13
		B 14
		B 15

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Fig 10.4.2 Manhole detail at use of fire protection pipe



B 01

B 02

B 03

B 04

B 05

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B 09

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B 14

B 15

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B 10.5 Equipment

Fig. 10.5.1

SANITÄREINRICHTUNG / SANITARY INSTALLATION											
GESCHOSS / STORY	RAUM ROOM			Seite 228							
		WASCHTISCH - ANLAGE WASH BASIN	TOILETTEN - ANLAGE TOILETS	Seite 228	B 10.6.1	B10.6.2	B10.6.3	B10.6.4	B10.6.5	B10.6.6	B10.6.7
KELLERGECHOSS - BASEMENT	URINAL ANLAGE URINAL			Seite 229							
	DUSCH/EINRICHTUNG SHOWER			Seite 230							
	STIEFELWASCHANLAGE BOOTS			Seite 231							
	WASCHBOTTICH SINK			Seite 231							
	TRINKBRUNNEN DRINKING FOUNTAIN			Seite 232							
	AUSGUSSECKEN SINK			Seite 232							
HAUPTGESCHOSS - MAIN FLOORS	TECHNIKZENTRALE TECHNICAL / MECHANICAL ROOM										
	TOILETTEN DAMEN LATRINES WOMEN										
	TOILETTEN HERREN LATRINES MEN										
	WASCHKÜCHE LAUNDRY										
	WAFFENKAMMER ARMS ROOM										
	SCHMUTZRAUM MUD ROOM										
	BÜRO UND / ODER LAGERRÄUME OFFICE AND / OR STORAGE										
DACHGESCHOSS - ATTIC	PUTZRAUM JANITOR CLOSET										
	FLUR CORRIDOR										
	BADEZIMMER SCHLAFRÄUME BATHROOMS										
	PUTZRAUM JANITOR CLOSET										
	KÜCHEN KITCHEN										
	ELEKTRO / VERTEILER ELECTRICAL / DISTRIBUTION PANEL										
	FLUR CORRIDOR										
SPITZB. - UP. ATTIC	HAUPT-EINGANG MAIN ENTRANCE										
	SPIELRAUM GAMEROOM										
	TOILETTEN DAMEN LATRINES WOMEN										
	TOILETTEN HERREN LATRINES MEN										
	ZUGANG ABSTELLRÄUME (GEPÄCK SOLDATEN) ACCESS STORAGE (LUGGAGE SOLDIERS)										
	RAUM FÜR TELEFONE TELEFON ROOM										
	FLUR CORRIDOR										
SPITZB. - UP. ATTIC	SPITZBODEN UPPER ATTIC										

B 01

B 02

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B 04

B 05

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B 14

B 15

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		SOURCE	
B 10.5.1	MECHANICAL ROOM basement		B 01
Equipment of mechanical room acc. to following list.			
1	Service sink	B10.6.8 Page 232	B 02
1	Sink – wall faucet	B10.7.9 Page 236	
1	Drain valve	B10.7.8 Page 236	B 03
1	Floor drain DN 100, grate size 198/198 mm	B10.9 Page 247	
B 10.5.2	LATRINES FEMALE basement		B 04
Equipment of female latrines acc. to following list as well as plans in section B07.		B07 Page 108-109	B 05
Both latrines (female and male) shall be equipped acc. to same criteria. The urinals will be accomplished with coverings at utilization of latrines as female latrines.			
2	Wash lavatories	B10.6.1 Page 228	B 06
2	Single-hole lavatory mixing faucets	B10.7.1 Page 234	
1	Drain valve	B10.7.8 Page 236	B 07
1	Paper dispenser	B10.8.14 Page 243	
2	Mirrors	B10.8.17 Page 244	B 08
1	Floor drain DN 50, grate size 148/148 mm	B10.9 Page 247	
2	Water closets	B10.6.2 Page 228	B 09
2	Toilet brushes	B10.8.12 Page 242	
2	Toilet paper holders	B10.8.13 Page 243	B 10
2	Wall buffers (installed behind toilet seat)	B10.8.20 Page 245	
4	Wall hooks with door stopper, 2 hooks per toilet stall	B10.8.21 Page 245	B 11
2	Urinals (with covering)	B10.6.3 Page 229	
1	Shower facility	B10.6.4 Page 230	B 12
1	Shower curtain	B10.6.4.1 Page 230	
1	Wall-mounted mixing faucet	B10.7.2 Page 234	B 13
1	Hand shower	B10.7.3 Page 234	
1	Shower rod	B10.7.4 Page 235	B 14
1	Shower hose	B10.7.5 Page 235	B 15

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	SOURCE	
1 Grab bar	B10.8.1 Page 239	B 01
2 Shower curtain rods	B10.8.10 Page 242	
2 Sponge baskets	B10.8.11 Page 242	B 02
6 Single hooks	B10.8.19 Page 244	
1 Floor drain DN 50, grate size 148/148 mm	B10.9 Page 247	B 03
B 10.5.3 LATRINES MALE basement Equipment of latrines male acc. to following list as well as plans in section B07.	B07	B 04
2 Wash lavatories	B10.6.1 Page 228	
2 Single-hole lavatory mixing faucets	B10.7.1 Page 234	B 05
1 Drain valve	B10.7.8 Page 236	
1 Paper dispenser	B10.8.14 Page 243	B 06
2 Mirrors	B10.8.17 Page 244	
1 Floor drain DN 50, grate size 148/148 mm	B10.9 Page 247	B 07
2 Water closets	B10.6.2 Page 228	B 08
2 Toilet brushes	B10.8.12 Page 242	
2 Toilet paper holders	B10.8.13 Page 243	B 09
2 Wall buffers (installed behind toilet seat)	B10.8.20 Page 245	
2 Wall hooks with door stopper, 2 hooks per toilet stall	B10.8.21 Page 245	B 10
2 Urinals	B10.6.3 Page 229	
1 Shower facility	B10.6.4 Page 230	B 11
2 Shower curtains	B10.6.4.1 Page 230	
1 Wall-mounted mixing faucet	B10.7.2 Page 234	B 12
1 Hand shower	B10.7.3 Page 234	
1 Shower rod	B10.7.4 Page 235	B 13
1 Shower hose	B10.7.5 Page 235	
1 Grab bar	B10.8.1 Page 239	B 14
2 Shower curtain rods	B10.8.10 Page 242	
		B 15

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	SOURCE	
2 Sponge baskets	B10.8.11 Page 242	B 01
6 Single hooks	B10.8.19 Page 244	B 02
1 Floor drain DN 50, grate size 148/148 mm	B10.9 Page 247	B 03
B 10.5.4 LAUNDRY ROOM basement		
Connection washing machines Cold water and warm water connection (60° C) DN 15 with washing machine connection valves. Nozzle with check valve, anti-vacuum device and water-stop-facility acc. to DVGW work sheet W376 and W377. A connection with cold and warm water (60° C) shall be provided for each washing machine. Arrangement of equipment		B 04
One drain valve ¾" with 5 m rubber hose, length 5.00 m and steel hasp of material 1.4301 (half hasp not rotary) additionally for cleaning purposes. No spray nozzle at hose.	B07 Page 112 B 10.7.8 Page 236	B 05
1 Service sink		
1 Sink wall-mounted mixing faucet	B10.6.8 Page 232 B10.7.9 Page 236	B 07
1 Floor drain DN 100, grate size 198/198 mm	B10.9 Page 247	
Washing machine connections quantity acc. to B 07.2.3	B10.7.8 Page 236 B07.2.3 Page 110	B 08
		B 09
B 10.5.5 MUD ROOM basement Arrangement of equipment, number of equipment elements to be coordinated with USAREUR. Discharge of mud water of drain gutter via a sludge trap. Drain body with mud trap and drain connection, incl. removable gridiron covering made of material 1.4301. One drain valve additionally for cleaning purposes. Installation height approx. 50 cm above top edge finished floor.	B07 Page 117 - 119	B 10
Boot washing facility Mixing faucet with integrated backflow preventer for each wash position.	B10.6.5 Page 231	B 11
Janitor's sink with plugs and pull chains		
Sink wall-mounted mixing faucet, 1 fitting per janitor's sink basin	B10.6.6 Page 231 B10.7.9 Page 236	B 12
Drain valve	B10.7.8 Page 236	B 13
A drain valve ¾" with rubber hose, length 5.00 m and steel hasp of material 1.4301 (semi-hasp cannot be turned) in addition to that for cleaning purposes. No spray nozzle provided at the hose.		B 14
Floor gutter	B10.9 Page 246	B 15

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B 10.5.6 JANITOR'S CLOSET basement Equipment see plans chapter B 07 1 Janitor's sink with plug and pull chain 2 Sink wall-mounted mixing faucet, 1 fitting per janitor's sink basin 1 Floor drain DN 100, grate size 198/198 mm	SOURCE B07 Page 86 B10.6.6 Page 231 B10.7.9 Page 236 B10.9 Page 247	B 01
		B 02
		B 03
B 10.5.7 CORRIDOR basement Water fountains without water cooling shall be installed in corridors. The water faucet shall meet NSF 61 standards.	NSF 61 B10.6.7 Page 232	B 04
		B 05
		B 06
B 10.5.8 BATHROOMS BEDROOMS main floors Equipment see standard layouts chapter B 06 1 Wash lavatory 1 Singe-hole lavatory mixing faucets 1 Drain valve 1 Towel holder (only bathroom type 5) 1 Towel holder (only bathroom type 5) 2 Towel holders (only bathroom type 1, type 2, type 3 and type 4) 2 Bath towel holders 4 Wall hooks (2 ea near each bathroom entrance) 2 Soap dishes 1 Mirror cabinet 2 Double hooks 1 Floor drain DN 50, grate size 148/148 mm 1 Water closet 1 Toilet brush 1 Toilet paper holders 1 Wall buffers (installed behind toilet seat) 1 Shower facility	B06 Page 35 -64 B10.6.1 Page 228 B10.7.1 Page 234 B10.7.6 Page 235 B10.8.2 Page 239 B10.8.3 Page 239 B10.8.4 Page 240 B10.8.5 Page 240 B10.8.6 Page 240 B10.8.15 Page 243 B10.8.16 Page 244 B10.8.18 Page 244 B10.9 Page 247 B10.6.2 Page 228 B10.8.12 Page 242 B10.8.13 Page 243 B10.8.20 Page 245 B10.6.4 Page 230	B 07
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		B 10
		B 11
		B 12
		B 13
		B 14
		B 15

DESIGN GUIDELINES

USAREUR - Restoration Program of Troop Billets - Standard 1+1

	SOURCE	
1 Shower curtain	B10.6.4.1 Page 230	B 01
1 Wall-mounted mixing faucet	B10.7.2 Page 234	
1 Hand shower	B10.7.3 Page 234	B 02
1 Shower rod	B10.7.4 Page 235	
1 Shower hose	B10.7.5 Page 235	B 03
1 Grab bar	B10.8.1 Page 239	
1 Shower curtain rod	B10.8.10 Page 242	B 04
2 Sponge baskets	B10.8.11 Page 242	
2 Door stopper 100 mm (installation acc. to requirement) or	B10.8.7 Page 241	B 05
2 Door stoppers 150 mm (installation acc. to requirement) or	B10.8.8 Page 241	
2 Door stoppers 200 mm (installation acc. to requirement)	B10.8.9 Page 241	B 06
B 10.5.9 JANITOR'S CLOSET main floors Equipment see plans chapter B 07		B 07
1 Janitor's sink with plug and pull chain	B07 Page 86 B10.6.6 Page 231	B 08
2 Sink – wall-mounted mixing faucet, 1 fitting per janitor's sink basin	B10.7.9 Page 236	
1 Floor drain DN 100, grate size 198/198 mm	B10.9 Page 247	B 09
B 10.5.10 KITCHENS main floors Kitchen sink Connection to a kitchen sink, double sink with lateral drip plate and closed bottom cabinet. Sink made of stainless steel. Dimensions of sink see section B 07.		B 10
1 Sink faucet	B07 Page 94 B10.7.7 Page 236	B 11
1 Sink siphon DN 50 with white drain pipe		B 12
B 10.5.11 KITCHENETTES Sink Connection to a kitchenette sink, single sink and closed bottom cabinet. Sink made of stainless steel. Dimensions of sink see section B 07.		B 13
1 Sink faucet	B07 Page 69-71 B10.7.7 Page 236	B 14
1 Sink siphon DN 50 with white drain pipe		B 15

DESIGN GUIDELINES

USAREUR - Restoration Program of Troop Billets - Standard 1+1

	SOURCE	
B 10.5.12 CORRIDORS main floors		B 01
Water fountains without water cooling shall be installed in corridors. The water faucet shall meet NSF 61 standards .	NSF 61	
	B10.6.7 Page 232	B 02
B 10.5.13 LATRINES FEMALE attic		
Equipment of latrines male acc. to following list as well as plans in section B07. Both latrines (female and male) shall be equipped acc. to same criteria. The urinals will be installed with coverings at utilization of latrines as female latrines.	B07 Page 126	B 03
2 Wash lavatories	B10.6.1 Page 228	B 04
2 Single-hole lavatory mixing faucets	B10.7.1 Page 234	B 05
1 Drain valve	B10.7.8 Page 236	
1 Paper dispenser	B10.8.14 Page 243	B 06
2 Mirrors	B10.8.17 Page 244	
1 Floor drain DN 50, grate size 148/148 mm	B10.9 Page 247	B 07
2 Water closets	B10.6.2 Page 228	
2 Toilet brushes	B10.8.12 Page 242	B 08
2 Toilet paper holders	B10.8.13 Page 243	
2 Wall buffers (installed behind toilet seat)	B10.8.20 Page 245	B 09
4 Wall hooks with door stopper, 2 hooks per toilet stall	B10.8.21 Page 245	
2 Urinals (with covering)	B10.6.3 Page 229	B 10
B 10.5.14 LATRINES MALE attic		
Equipment of latrines male acc. to following list as well as plans in section B07.	B07	B 11
2 Wash lavatories	B10.6.1 Page 228	
2 Single-hole lavatory mixing faucets	B10.7.1 Page 234	B 12
1 Drain valve	B10.7.8 Page 236	
1 Paper dispenser	B10.8.14 Page 243	B 13
2 Mirrors	B10.8.17 Page 244	
1 Floor drain DN 50, grate size 148/148 mm	B10.9 Page 247	B 14
		B 15

DESIGN GUIDELINES

USAREUR - Restoration Program of Troop Billets - Standard 1+1

	SOURCE	
2 Water closets	B10.6.2 Page 228	B 01
2 Toilet brushes	B10.8.12 Page 242	
2 Toilet paper holders	B10.8.13 Page 243	B 02
2 Wall buffers (installed behind toilet seat)	B10.8.20 Page 245	
4 Wall hooks with door stopper, 2 hooks per toilet stall	B10.8.21 Page 245	B 03
2 Urinals	B10.6.3 Page 229	
		B 04
B 10.5.14 CORRIDOR attic	NSF 61	
Water fountains without water cooling shall be installed in corridors.		B 05
The water faucets shall meet NSF 61 standards.	B10.6.7 Page 232	
		B 06
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DESIGN GUIDELINES

USAREUR - Restoration Program of Troop Billets - Standard 1+1

				SOURCE	
B 10.6	EQUIPMENT OBJECTS				B 01
B 10.6.1	LAVATORY FACILITY				
The text in B 07. Page 73 shall be absolutely observed for the judgement and selection of equality.				see	B 07
Lavatories					
Lavatory made of crystal porcelain with faucet hole and overflow.					B 02
Dimensions w x d = approx. 600 x approx. 490 mm, color white.					B 03
Incl. corner valves, rubber plug without chain and cup siphon chrome-plated.					B 04
Installed to support scaffold. Top edge lavatory 850 mm of finished floor.					B 05
Lavatory					
Manufacturer	KERAMAG	IDEAL-STANDARD	VILLEROY + BOCH		
Series	Renova	San Remo	Omnia Classic		
Art.-No.	221060	E746001	71226001		
Protective room allowance	Yes				
B 10.6.2	LATRINE FACILITY				B 06
The text in B 07. Page 73 shall be absolutely observed for the judgement and selection of equality.				see	B 07
Water closet					
Water closet made of crystal porcelain. Accomplishment as deep flush water closets. Color white.					B 07
Incl. flush mounted flushing box and support scaffold. Water closet installed to top edge 45 cm.					B 08
Toilet seat matching selected water closet, without lid, of Duroplast with screws to be loosened only with a wrench, heavy-duty type with continuous hinge spindle made of CNS. Color white.					B 09
Water closet					
Manufacturer	KERAMAG	IDEAL-STANDARD	VILLEROY + BOCH		B 10
Series	Renova	San Remo	Omnia Classic		
Art.-No.	204500	R340101	768210		
Protective room allowance	Yes				
Toilet seat					B 11
Manufacturer	PRESSALIT	SCHWAB			
Type / No.	Pressalit 2000	Sani Med			
Art.-No.	49	58 S			
Hinge	B53	Continuous			B 12
Flush mounted flushing box					
Manufacturer	DAL	MEROBLOCK	GEBERIT		B 13
Type	Uniset	Mono	Kombifix		
Art.-No.:	336.00.800	503898	110.857.00.1		
Content	6 - 9 l	6 - 9 l	6 - 9 l		
Covering	ClassicSurf	Classic	200 F		B 14
Art.-No.:	06.11.85	006.11.85	115.222.11.1		B 15

DESIGN GUIDELINES

USAREUR - Restoration Program of Troop Billets - Standard 1+1

B 10.6.3 Urinal facility

The text in **B 07. Page 73** shall be absolutely observed for the judgement and selection of equality. see

Urinals made of sanitary porcelain. Installation 75 cm above finished floor. Supply and drain concealed. Color white.

Incl. urinal wall built-in pressure flushing valve with support rack. Color of cover panel white.

The urinals in latrines female basement and attic shall be accomplished with cover.

Urinal

Manufacturer	KERAMAG	IDEAL-STANDARD	DURAVIT
Series	Mondo	Tizio	Dellarco
Art.-No.	239500 / 239400	K5513 / K5512	085 631.00
Drain	concealed	concealed	concealed
Pressure flushing valve			
Manufacturer	DAL	FRIATEC	GEBERIT
Flushing valve	Uniset	Meroblock	Public
Type / No.	505.00.800	UR / 3-35-59	UR-HP
Cover panel	Surf	Meroblock	115.805.11.1
Color	white	Z90 / white	white

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DESIGN GUIDELINES

USAREUR - Restoration Program of Troop Billets - Standard 1+1

B 10.6.4 SHOWER FACILITY

The text in **B 07. Page 73** shall be absolutely observed for the judgement and selection of equality. see

Shower tub

Shower tub of enameled steel, without overflow, material thickness 3.5 mm, acid resistant acc. to DIN 51150.

Dimensions: 1200 x 800 x 280 mm

With shower tub base sound insulated acc. to DIN 4109, with height adjustable base supports, sound deadening mats and tub anchors, with inspection door, of material 1.4301, dimensions 200/200 mm. Article "inotec" no. 5654.

Drain valve DN 40, top part made of non-rusting steel, bottom part made of synthetic material, as shaft valve with stand pipe approx. 70 mm long and odor lock. Drain pipe connection DN 50, arrangement on shower side.

Shower facility

Manufacturer	Bette		
Series / Art. No.	586		
Color	white		
Depth	280mm		
Overflow	without		

Drain set

Manufacturer	CORRECTA	GEBERIT	VIEGA
Drain	Poresta Fix DF		Omnieplex
Type / No.	18.200.077	150.074.00.1	264734
Stand pipe	telescopic	plexiglass	

B 10.6.4.1 SHOWER CURTAIN

With shower curtain made of 100 % polyester, completely manufactured with hemmed sides, fastening loops, lead band and curtain rings.

Length approx. 1829mm; width approx. 1067mm, = 72" x 42"

20 % more shower curtains shall be additionally specified and submitted to local DPW.

Shower curtain

Manufacturer	HEWI		
Type / No.	VH 550 1		
Decor	white / silver		

Curtain loops

Manufacturer	HEWI		
Type / No.	33.1810		
Color	97		

Shower curtain rod

see

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DIN 51150

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DESIGN GUIDELINES

USAREUR - Restoration Program of Troop Billets - Standard 1+1

B 10.6.5 Boot washing facility

The text in **B 07. Page 73** shall be absolutely observed for the judgement and selection of equality. see

Cleaning facility made of stainless steel as series washing facility. Each wash station with inclined, hinged grating. (For erection at wall). Construction with base structure (base structure adapted to total height 750 mm).

Dimensions:

4 wash stations 2800 mm long, 700 mm deep, 750 mm high

3 wash stations 2100 mm long, 700 mm deep, 750 mm high

2 wash stations 1400 mm long, 700 mm deep, 750 mm high

Quantity shall be coordinated with USAREUR ODCSENGR prior to commencement of design.

Fitting combination

Each wash station with one fitting combination DN 15, with hose made of synthetic approx. 1 m long, suspension hooks and lever valve – hand brush. Supplied with cold and warm water (60°C).

Boot washing facility

Manufacturer	ROTTER	KUHFUß	
Series / Art. No.	E 1	Standard	
Material	1.4301	1.4301	
Grate	flap-type	flap-type	

Fitting combination

Manufacturer	ROTTER	ROTTER	
Drain	G	G	

B 10.6.6 Janitor's sinks

The text in **B 07. Page 73** shall be absolutely observed for the judgement and selection of equality. see

Double janitor's sink installed to wall of cast stone. With 400 mm high, epoxy coated steel bases as support, with height adjustable bases. Base panel with link adjusting to floor slope, with chain and plug.

Total height: 750 mm

Dimensions: 1480 mm long, 650 mm deep, 350 mm high

The number shall be coordinated with USAREUR ODCSENGR at commencement of design.

Attention: surface coating shall be adjusted to increased warm water temperatures in basement (60°).

Janitor's sink

Manufacturer	ROTTER	NIETHAMMER	
Serie / Art. No.	DWB-BW 1480	and/or	
Material	cast stone	cast stone	
Fastening	stand legs	stand legs	

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DESIGN GUIDELINES

USAREUR - Restoration Program of Troop Billets - Standard 1+1

B 10.6.7 Water fountain

The text in **B 07. Page 73** shall be absolutely observed for the judgement and selection of equality. see

Water fountain made of polyester concrete for installation at flat wall. Round interior basin with integrated fitting base, top side with circumferential water edge.

Push button quick lock drinking fitting 3/8", brass polished, chrome-plated, with slanted jumping jet.

Drinking fitting with NSF 61 allowance.

Dimensions: 350 x 350 x 150 mm w/d/h
Color: white

Water fountain

Manufacturer	ROTTER	NIETHAMMER	
Water fountain			
Series / Art. No.	TRB - R	Kissingen	
Material	Rotolith	polyester concrete	
Air diffuser			
Manufacturer	ROTTER	NIETHAMMER	
Allowance	NSF 61	NSF 61	

B 10.6.8 Service sink

The text in **B 07. Page 73** shall be absolutely observed for the judgement and selection of equality. see

Service sink made of enameled steel. With pulled up back wall (approx. 200 mm), circumferential border profile made of synthetic.

With folding down gridiron.

With drain and siphon, as well as chain and plug.

Color: white
Dimensions approx. 500 x 330 x 165(365)mm w/d/h

Installation of wall faucet of service sink so high that a bucket can be placed to the gridiron (installation height center fitting approx. 300 mm above gridiron)

Service sink

Manufacturer	ALAPE	REISSER	PFEIFFER+MAY
Series / Art. No.	6010001	Standard	Standard
Border profile	synthetic	synthetic	synthetic
Siphon			
Manufacturer	GEBERIT	REISSER	PFEIFFER+MAY
Accomplishment	synthetic DN50	synthetic DN50	synthetic DN50

SOURCE

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NSF 61

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DESIGN GUIDELINES

USAREUR - Restoration Program of Troop Billets - Standard 1+1

B 10.7

FITTINGS

Fig. 10.7.1

SANITÄRARMATUREN / SANITARY FAUCETS										
GESCHOSS / STORY	RAUM ROOM			Seite 234			Seite 234			Seite 234
				B 10.7.1			B10.7.2			B10.7.3
KELLERGEESCHOSS - BASEMENT	TECHNIKZENTRALE TECHNICAL / MECHANICAL ROOM			WASCHTISCH-EINLOCHBATTERIE BASSIN FAUCET SINGLEHOLE			WAND - BATTERIE SHOWER FAUCET WALL MOUNT.			B10.7.4
	TOILETTEN DAMEN LATRINES WOMEN			HANDBRAUSE HAND SHOWER			BRAUSESTANGE SHOWER ROD			B10.7.5
	TOILETTEN HERREN LATRINES MEN			BRAUESCHLAUCH SHOWER HOSE			AUSLAUFVENTIL WALL FAUCET			B10.7.6
	WASCHKÜCHE LAUNDRY			SPÜLTISCH - BATTERIE DISHWASHING FAUCET WALL M.			AUSLAUFVENTIL WALL FAUCET			B10.7.7
	WAFFENKAMMER ARMS ROOM			SPÜLTISCH - BATTERIE DISHWASHING FAUCET WALL M.			AUSLAUFVENTIL WALL FAUCET			B10.7.8
	SCHMUTZRAUM MUD ROOM			SPÜLTISCH - BATTERIE DISHWASHING FAUCET WALL M.			AUSLAUFVENTIL WALL FAUCET			B10.7.9
	BÜRO UND / ODER LAGERRÄUME OFFICE AND / OR STORAGE			SPÜLTISCH - BATTERIE DISHWASHING FAUCET WALL M.			AUSLAUFVENTIL WALL FAUCET			B10.7.9
	PUTZRAUM JANITOR CLOSET			SPÜLTISCH - BATTERIE DISHWASHING FAUCET WALL M.			AUSLAUFVENTIL WALL FAUCET			B10.7.9
	FLUR CORRIDOR			SPÜLTISCH - BATTERIE DISHWASHING FAUCET WALL M.			AUSLAUFVENTIL WALL FAUCET			B10.7.9
HAUPTGESCHOSSE - MAIN FLOORS	BADEZIMMER SCHLAFRÄUME BATHROOMS			SPÜLTISCH - BATTERIE DISHWASHING FAUCET WALL M.			AUSLAUFVENTIL WALL FAUCET			B10.7.9
	PUTZRAUM JANITOR CLOSET			SPÜLTISCH - BATTERIE DISHWASHING FAUCET WALL M.			AUSLAUFVENTIL WALL FAUCET			B10.7.9
	KÜCHEN UND TEEKÜCHEN KITCHEN AND KITCHENETTE			SPÜLTISCH - BATTERIE DISHWASHING FAUCET WALL M.			AUSLAUFVENTIL WALL FAUCET			B10.7.9
	ELEKTRO / VERTEILER ELECTRICAL / DISTRIBUTION BOARD			SPÜLTISCH - BATTERIE DISHWASHING FAUCET WALL M.			AUSLAUFVENTIL WALL FAUCET			B10.7.9
	FLUR CORRIDOR			SPÜLTISCH - BATTERIE DISHWASHING FAUCET WALL M.			AUSLAUFVENTIL WALL FAUCET			B10.7.9
	HAUPTINGANG MAIN ENTRANCE			SPÜLTISCH - BATTERIE DISHWASHING FAUCET WALL M.			AUSLAUFVENTIL WALL FAUCET			B10.7.9
DACHGESCHOSS - ATTIC	SPIELRAUM GAMEROOM			SPÜLTISCH - BATTERIE DISHWASHING FAUCET WALL M.			AUSLAUFVENTIL WALL FAUCET			B10.7.9
	TOILETTEN DAMEN LATRINES WOMEN			SPÜLTISCH - BATTERIE DISHWASHING FAUCET WALL M.			AUSLAUFVENTIL WALL FAUCET			B10.7.9
	TOILETTEN HERREN LATRINES MEN			SPÜLTISCH - BATTERIE DISHWASHING FAUCET WALL M.			AUSLAUFVENTIL WALL FAUCET			B10.7.9
	ZUGANG ABSTELLRÄUME (GEPÄCK SOLDATEN) ACCESS STORAGE (LUGGAGE SOLDIERS)			SPÜLTISCH - BATTERIE DISHWASHING FAUCET WALL M.			AUSLAUFVENTIL WALL FAUCET			B10.7.9
	RAUM FÜR TELEFONE TELEFON ROOM			SPÜLTISCH - BATTERIE DISHWASHING FAUCET WALL M.			AUSLAUFVENTIL WALL FAUCET			B10.7.9
SPITZB. - UP. ATTIC	SPITZBODEN UPPER ATTIC			SPÜLTISCH - BATTERIE DISHWASHING FAUCET WALL M.			AUSLAUFVENTIL WALL FAUCET			B10.7.9
				SPÜLTISCH - BATTERIE DISHWASHING FAUCET WALL M.			AUSLAUFVENTIL WALL FAUCET			B10.7.9

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DESIGN GUIDELINES

USAREUR - Restoration Program of Troop Billets - Standard 1+1

B 10.7.1 Lavatory single-hole mixing faucet

The text in **B 07. Page 73** shall be absolutely observed for the judgement and selection of equality. see

Mixing faucet as single-hole faucet DN 15, with swivelling sink drain projection approx. 110mm. With aerator, without installation panel, without pull rod.
Fitting noise class II acc. to DIN 4109.

Lavatory single-hole mixing faucet

Manufacturer	GROHE	IDEAL STANDARD	
Series	Grohe Atlanta	Alpha	
Art.-No.	36 610	A1023AA	
Material	cast	cast	
Drain	swivelling	swivelling	
Surface	chromium	chromium	
Handles	Trecom blue 11101	metal blue	
Handles	Trecom red 11102	metal – red	
Fitting height	255 mm	223 mm	
Drain height	190 mm	165 mm	

B 10.7.2 Wall-mounted mixing faucet

The text in **B 07. Page 73** shall be absolutely observed for the judgement and selection of equality. see

Wall faucet DN 15 as shower faucet with integrated check valve, own-secured against back flow, shower exit ½". With S-connections and cover plates.
Fitting noise class II acc. to DIN 4109.

Wall-mounted mixing faucet

Manufacturer	GROHE	IDEAL STANDARD	
Series	Costa	Alpha	
Art.-No.	26 210	A1772AA	
Material	cast	cast	
Own-secured	yes	yes	

B 10.7.3 Hand shower

The text in **B 07. Page 73** shall be absolutely observed for the judgement and selection of equality. see

Hand shower DN 15, with controllable shower jet.

Hand shower

Manufacturer	GROHE	IDEAL STANDARD	
Series	Relexa Plus Equ.	Sport	
Art.-No.	28 215	A2259AA	
Jet	controllable	as combination	

Remark:

The order number IDEAL-STANDARD includes hand shower, shower hose and sliding rod.

SOURCE

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DESIGN GUIDELINES

USAREUR - Restoration Program of Troop Billets - Standard 1+1

B 10.7.4 Shower rod

The text in **B 07. Page 73** shall be absolutely observed for the judgement and selection of equality. see

Shower rod length approx. 1000mm, diameter approx. 28mm, with wall holders, sliding pieces and flexible link. Height adjustment via locking nut, adjustment of slope angle via grid mechanism. With lime protection.

Shower rod

Manufacturer	GROHE	IDEAL STANDARD	
Series	Relaxa Plus	Sport	
Art.-No.	28 621	A2259AA	
Slope	adjustable	as combination	

Remark:

The order number IDEAL-STANDARD includes hand shower, shower hose and sliding rod.

B 10.7.5 Shower hose

The text in **B 07. Page 73** shall be absolutely observed for the judgement and selection of equality. see

Synthetic shower hose white, length approx. 1500mm. Connections ½" x ½" chromium-plated.

Shower hose

Manufacturer	GROHE	IDEAL STANDARD	
Series	Relaxa	Sport	
Art.-No.	28 103	A2259AA	
Length	1500mm	as combination	

B 10.7.6 Drain valve

The text in **B 07. Page 73** shall be absolutely observed for the judgement and selection of equality. see

Drain valve with aerator, projection approx. 100mm.

Drain valve

Manufacturer	GROHE	IDEAL STANDARD	
Type / No.	Atlanta	Europa	
Art.-No.	30068	A2091AA	
Aerator	yes	yes	

SOURCE

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B 07

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DESIGN GUIDELINES

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B 10.7.7 Sink faucet

The text in **B 07. Page 73** shall be absolutely observed for the judgement and selection of equality. see

Sink wall faucet with pipe drain. Projection approx. 185mm.

With NSF 61 allowance.

With S-connections and cover plates.

Fitting noise class II acc. to DIN 4109.

Drain valve

Manufacturer	GROHE		
Type / No.	Classic		
Art.-No.	31 014		
Allowance	NSF 61		
Accomplishment	two-handle		

B 10.7.8 Drain valve

Drain valve with hose connection and pipe aerator. Own-secured against back flow. Projection approx. 40mm.

Drain valve

Manufacturer	GROHE		
Type / No.	Costa		
Art.-No.	30 008		
Own-secured	yes		

B 10.7.9 Sink wall-mounted mixing faucet

The text in **B 07. Page 73** shall be absolutely observed for the judgement and selection of equality. see

Sink wall faucet with pipe drain. Projection approx. 200mm.

With S-connections and cover plates.

Drain valve

Manufacturer	GROHE	IDEAL STANDARD	
Type / No.	Classic	Alpha	
Art.-No.	31 017	A 1408AA	

SOURCE

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EQUIPMENT

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B 15

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Fig. 10.8.2

SANITÄRAUSSTATTUNG / SANITARY INSTALLATION												
GESCHOSS / STORY	RAUM ROOM											
		B 10.8.14	B 10.8.15	B 10.8.16	B 10.8.17	B 10.8.18	B 10.8.19	B 10.8.20	B 10.8.21			
KELLERGEESCHOSS - BASEMENT	TECHNIKZENTRALE TECHNICAL / MECHANICAL ROOM											
	TOILETTEN DAMEN LATRINES WOMEN											
	TOILETTEN HERREN LATRINES MEN											
	WASCHKÜCHE LAUNDRY											
	WAFFENKAMMER ARMS ROOM											
	SCHMUTZRAUM MUD ROOM											
	BÜRO UND / ODER LAGERRÄUME OFFICE AND / OR STORAGE											
	PUTZRAUM JANITOR CLOSET											
	FLUR CORRIDOR											
HAUPTGESCHOSS - MAIN FLOORS	BADEZIMMER SCHLAFRÄUME BATHROOMS											
	PUTZRAUM JANITOR CLOSET											
	KÜCHEN KITCHEN											
	ELEKTRO / VERTEILER ELECTRICAL / DISTRIBUTION BOARD											
	FLUR CORRIDOR											
	HAUPTINGANG MAIN ENTRANCE											
DACHGESCHOSS - ATTIC	SPIELRAUM GAMEROOM											
	TOILETTEN DAMEN LATRINES WOMEN											
	TOILETTEN HERREN LATRINES MEN											
	ZUGANG ABSTELLRÄUME (GEPÄCK SOLDATEN) ACCESS STORAGE (LUGGAGE SOLDIERS)											
	RAUM FÜR TELEFONE TELEFON ROOM											
	FLUR CORRIDOR											
SPITZB. - UP. ATTIC	SPITZBODEN UPPER ATTIC											

Arrangement of sanitary equipment objects shall be performed according to the standard layouts and sections.
(see **B 06**, Pages 35 – 55)

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DESIGN GUIDELINES

USAREUR - Restoration Program of Troop Billets - Standard 1+1

B 10.8.1 Grab bar shower

The text in **B 07. Page 73** shall be absolutely observed for the judgement and selection of equality. see

Grab bar made of stainless steel, material 1.4301, made of pipe 25 mm, surface smooth, high gloss polished, with 3-hole-fastening diameter 80 mm. Length 300 mm.

Grab bar shower

Manufacturer	LEHNEN	METALLTEC	AMS / BLANCO
Type / No.	grab bar	grab bar	grab bar
Art.-No.	10 021 00	B-10-30-10-US	539 900
Fastening	visible	visible	visible
Length	300 mm	300 mm	300 mm

B 10.8.2 Towel holder

The text in **B 07. Page 73** shall be absolutely observed for the judgement and selection of equality. see

Towel holder made of stainless steel, material 1.4301, execution right, 2-arm made of pipe 25 mm off-set arrangement, surface polished, fastening panel 110x140 mm. Projection 450 mm.

Towel holder

Manufacturer	LEHNEN	METALLTEC	AMS / BLANCO
Type / No.	towel holder	towel holder	towel holder
Art.-No.	10 458 10	B-10-45-20-US	539 915
Fastening	visible	visible	visible
Arrangement	right	right	right

B 10.8.3 Towel holder

The text in **B 07. Page 73** shall be absolutely observed for the judgement and selection of equality. see

Towel holder made of stainless steel, material 1.4301, execution left, 2-arm made of pipe 25 mm off-set arrangement, surface polished, fastening panel 110x140 mm. Projection 450 mm.

Towel holder

Manufacturer	LEHNEN	METALLTEC	AMS / BLANCO
Type / No.	towel holder	towel holder	towel holder
Art.-No.	10 458 20	B-10-45-30-US	539 916
Fastening	visible	visible	visible
Arrangement	left	left	left

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DESIGN GUIDELINES

USAREUR - Restoration Program of Troop Billets - Standard 1+1

B 10.8.4 Towel holder

The text in **B 07. Page 73** shall be absolutely observed for the judgement and selection of equality. see

Towel holder made of stainless steel, material 1.4301, made of pipe 25 mm, surface smooth, high gloss polished, with 3-hole-fastening diameter 80 mm. Length 450 mm.

Towel holder

Manufacturer	LEHNEN	METALLTEC	AMS / BLANCO
Type / No.	towel holder	towel holder	towel holder
Art.-No.	10 463 00	B-10-45-40-US	539 901
Fastening	visible	visible	visible
Length	450 mm	450 mm	450 mm

B 10.8.5 Towel holder

The text in **B 07. Page 73** shall be absolutely observed for the judgement and selection of equality. see

Towel holder made of stainless steel, material 1.4301, made of pipe 25 mm, surface smooth, high gloss polished, with 3-hole-fastening diameter 80 mm. Length 800 mm, projection 75 mm.

Towel holder

Manufacturer	LEHNEN	METALLTEC	AMS / BLANCO
Type / No.	towel holder	towel holder	towel holder
Art.-No.	10 466 00	B-10-80-50-US	539 902
Fastening	visible	visible	visible
Length	800 mm	800 mm	800 mm

B 10.8.6 Wall hooks

The text in **B 07. Page 73** shall be absolutely observed for the judgement and selection of equality. see

Wall hooks made of stainless steel material 1.4301, surface high-gloss polished. Diameter approx. 20mm, projection 50mm.

Wall hooks

Manufacturer	LEHNEN	METALLTEC	AMS / BLANCO
Type / No.	Design hooks	Hook	Hook
Art.-No.	11 256 00	B-10-5-90-US	539 914
Fastening	invisible	invisible	invisible
Length	50 mm	50 mm	50 mm

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B 10.8.7 Door stopper

The text in **B 07. Page 73** shall be absolutely observed for the judgement and selection of equality. see

Door stopper made of stainless steel material 1.4301, surface high-gloss polished, made of pipe 25mm with synthetic plug and top slip nose made of spindle with 8mm diameter, with 3-hole fastening diameter of fastening panel 80mm.

Projection 80 mm

Door stopper

Manufacturer	LEHNEN	METALLTEC	AMS / BLANCO
Type/ No.	slip nose		
Art.-No.	11 260 00	B-10-10-100-US	539 920
Fastening	visible	visible	visible
Length	100 mm	100 mm	100 mm

B 10.8.8 Door stopper

The text in **B 07. Page 73** shall be absolutely observed for the judgement and selection of equality. see

Door stopper made of stainless steel material 1.4301, surface high-gloss polished, made of pipe 25mm with synthetic plug and top slip nose made of spindle with 8mm diameter, with 3-hole fastening diameter of fastening panel 80mm.

Projection 100 mm

Door stopper

Manufacturer	LEHNEN	METALLTEC	AMS / BLANCO
Type / No.	slip nose		
Art.-No.	11 261 00	B-10-15-110-US	539 921
Fastening	visible	visible	visible
Length	150 mm	150 mm	150 mm

B 10.8.9 Door stopper

The text in **B 07. Page 73** shall be absolutely observed for the judgement and selection of equality. see

Door stopper made of stainless steel material 1.4301, surface high-gloss polished, made of pipe 25mm with synthetic plug and top slip nose made of spindle with 8mm diameter, with 3-hole fastening diameter of fastening panel 80mm.

Projection 150 mm

Door stopper

Manufacturer	LEHNEN	METALLTEC	AMS / BLANCO
Type / No.	slip nose		
Art.-No.	11 262 00	B-10-20-120-US	539 922
Fastening	visible	visible	visible
Length	200 mm	200 mm	200 mm

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				SOURCE																
B 10.8.10 Shower curtain rod				B 07	B 01															
The text in B 07. Page 73 shall be absolutely observed for the judgement and selection of equality. see					B 02															
Shower curtain rod made of stainless steel material 1.4301, surface smooth, high-gloss polished, made of pipe 32mm, with 3-hole fastening, diameter 80mm. With one-sided interior plug-in pipe.					B 03															
Installation height see plans section B 06.					B 04															
Rod <table><tr><td>Manufacturer</td><td>LEHNEN</td><td>METALLTEC</td><td>AMS / BLANCO</td></tr><tr><td>Art.-No.</td><td>14 012 00</td><td>B-10-120-130-US</td><td>539 930</td></tr><tr><td>Fastening</td><td>visible</td><td>visible</td><td>visible</td></tr></table>					Manufacturer	LEHNEN	METALLTEC	AMS / BLANCO	Art.-No.	14 012 00	B-10-120-130-US	539 930	Fastening	visible	visible	visible	B 05			
Manufacturer	LEHNEN	METALLTEC	AMS / BLANCO																	
Art.-No.	14 012 00	B-10-120-130-US	539 930																	
Fastening	visible	visible	visible																	
Exception: The shower curtain for the showers in basement latrines shall be fastened to the room entrance, the curtain rod shall be fastened on one side of the wall as above and provided with a support on the other side.				B 06																
B 10.8.11 Sponge basket				B 07	B 07															
The text in B 07. Page 73 shall be absolutely observed for the judgement and selection of equality. see					B 08															
Sponge basket for shower made of stainless steel material 1.4301, corner type, surface polished. Round rods shall be bordered at the top with circumferential flat steel bar and welded.					B 09															
Sponge basket <table><tr><td>Manufacturer</td><td>LEHNEN</td><td>METALLTEC</td><td>AMS / BLANCO</td></tr><tr><td>Art.-No.</td><td>11 155 00</td><td>B-10-14-80-US</td><td>539 913</td></tr><tr><td>Fastening</td><td>visible</td><td>visible</td><td>visible</td></tr></table>					Manufacturer	LEHNEN	METALLTEC	AMS / BLANCO	Art.-No.	11 155 00	B-10-14-80-US	539 913	Fastening	visible	visible	visible	B 10			
Manufacturer	LEHNEN	METALLTEC	AMS / BLANCO																	
Art.-No.	11 155 00	B-10-14-80-US	539 913																	
Fastening	visible	visible	visible																	
B 10.8.12 Toilet brush set				B 11																
The text in B 07. Page 73 shall be absolutely observed for the judgement and selection of equality. see				B 12																
Toilet brush set, wall mounted, made of stainless steel material 1.4301, with drip shell, surface polished, incl. toilet brush with rim brush made of synthetic.				B 13																
Toilet brush set <table><tr><td>Manufacturer</td><td>LEHNEN</td><td>METALLTEC</td><td>AMS / BLANCO</td></tr><tr><td>Type / No.</td><td>brush holder</td><td>toilet brush</td><td>toilet brush</td></tr><tr><td>Art.-No.</td><td>11 105 00</td><td>B-10-20-70-US</td><td>539 912</td></tr><tr><td>Fastening</td><td>visible</td><td>visible</td><td>visible</td></tr></table>				Manufacturer	LEHNEN	METALLTEC	AMS / BLANCO	Type / No.	brush holder	toilet brush	toilet brush	Art.-No.	11 105 00	B-10-20-70-US	539 912	Fastening	visible	visible	visible	B 14
Manufacturer	LEHNEN	METALLTEC	AMS / BLANCO																	
Type / No.	brush holder	toilet brush	toilet brush																	
Art.-No.	11 105 00	B-10-20-70-US	539 912																	
Fastening	visible	visible	visible																	
				B 15																

DESIGN GUIDELINES

USAREUR - Restoration Program of Troop Billets - Standard 1+1

B 10.8.13 Toilet paper holder

The text in **B 07. Page 73** shall be absolutely observed for the judgement and selection of equality. see

Toilet paper holder made of stainless steel material 1.4301, in L-shape for 1 roll toilet paper, with 3-hole fastening diameter 80mm. Surface polished, fastening with stainless steel screws. Wall distance up to center pipe 85mm, pipe diameter approx. 22mm.

Toilet paper holder

Manufacturer	LEHNEN	METALLTEC	AMS / BLANCO
Type / No.	toilet paper holder	toilet paper holder	toilet paper holder
Art.-No.	11 055 00	B-10-21-60-US	539 910
Quantity rolls	1	1	1
Fastening	visible	visible	visible

B 10.8.14 Paper dispenser

The text in **B 07. Page 73** shall be absolutely observed for the judgement and selection of equality. see

Paper towel dispenser for American paper size 270x190mm. Dispenser made of CNS, with turn knob as lock.

Paper dispenser

Manufacturer	ROTTER		
Type / No.	Bobrick		
Art.-No.	B-2621		
Paper size	273 x 191 mm		

B 10.8.15 Soap dish

The text in **B 07. Page 73** shall be absolutely observed for the judgement and selection of equality. see

Soap dish made of synthetic, without drain with chromium-plated holding device.

Soap dish

Manufacturer	KEUCO	KUHFUSS	ROTTER
Series	Tropex	Easy	Bobrick
Art.-No.	4055010003	870715	B-680
Material	synthetic	stainless steel	stainless steel

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B 10.8.16 Mirror cabinet with shelves

Mirror cabinet with shelves, made of synthetic with aluminum covering, rotary doors with opening angle 125 °. With quality mirrors on exterior side of doors. Interior equipment with adjustable glass shelves. Lighting with 2 x 40 W. Model without electrical receptacle or switch. Cabinet shall have two equal horizontal sides. Dimensions 60 x 58 x 15.5 cm

Mirror cabinet with shelves

Manufacturer	SCHNEIDER		
Series	ECO 60/2/GFL		
Art.-No.	108.065		
Receptacles	none		
Luminous intensity	2 x 40 Watt		
Lighting	bulbs		

B 10.8.17 Mirror

Mirror with shelf. Dimensions approx. 61 x 61 cm

Mirror

Manufacturer	ROTTER		
Type/ No.	Bobrick		
Art.-No.	B-292 - 2424		
Material	glass		
Shelf	stainless steel		

B 10.8.18 Wall hook

The text in **B 07 Page 73** shall be absolutely observed for the judgement and selection of equality. see

Hook made of stainless steel material 1.4301 with two fastening drillings

Wall hook

Manufacturer	LEHNEN	METALLTEC	AMS / BLANCO
Art.-No.	11 256 00	B-10-2-140-US	A 115.0
Material	1.4301	1.4301	1.4301

B 10.8.19 Hook rail

The text in **B 07 Page 73** shall be absolutely observed for the judgement and selection of equality. see

Hook rail of stainless steel 18/10, dull ground with 3 hooks, mounting rail 102 mm high, length 610 mm.

Hook rail

Manufacturer	ROTTER		
Art.-No.	B-232 x 24		
Material	1.4301		

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SOURCE

B 10.8.20 Wall door buffer

Wall door buffer made of nylon, approx. 35 mm diameter, approx. 24 mm long.
With one black, elastical buffer. **Fastening by glueing.**

Wall door buffer

Manufacturer	HEWI		
Art.-No.	610		
Color	No. 99		
Material	Nylon		

B 10.8.21 Wall hook with door buffer

Wall hook with black door buffer, approx. 70 mm diameter, approx. 105 mm long.

With a black, elastic buffer.

Mounting height as clothes hook 1.60 m above floor, as door buffer 1.90 m above floor.

Door buffer

Manufacturer	HEWI		
Art.-No.	520.70.1P		
Color	No. 97		
Material	Nylon		

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B 10.9

FLOOR DRAINS

Fig. 10.9.1

BODENABLÄUFE / FLOOR DRAINS													
GESCHOSS / STORY	RAUM ROOM												
		BODENABLAUF DN 50 FLOOR DRAIN DN 50	BODENABLAUF DN 100 FLOOR DRAIN DN 100	BODENRINNE DRAINAGE CHANNEL	SEITLICHER ZULAUF								
KELLERGEESCHOSS - BASEMENT	TECHNIKZENTRALE TECHNICAL / MECHANICAL ROOM												
	TOILETTEN DAMEN LATRINES WOMEN												
	TOILETTEN HERREN LATRINES MEN												
	WASCHKÜCHE LAUNDRY												
	WAFFENKAMMER ARMS ROOM												
	SCHMUTZRAUM MUD ROOM												
	BÜRO UND / ODER LAGERRÄUME OFFICE AND / OR STORAGE												
	PUTZRAUM JANITOR CLOSET												
	FLUR CORRIDOR												
HAUPTGESCHOSSE - MAIN FLOORS	BADEZIMMER SCHLAFRÄUME BATHROOMS												
	PUTZRAUM JANITOR CLOSET												
	KÜCHEN KITCHEN												
	ELEKTRO / VERTEILER ELECTRICAL / DISTRIBUTION BOARD												
	FLUR CORRIDOR												
	HAUPTINGANG MAIN ENTRANCE												
DACHGESCHOSS - ATTIC	SPIELRAUM GAMEROOM												
	TOILETTEN DAMEN LATRINES WOMEN												
	TOILETTEN HERREN LATRINES MEN												
	ZUGANG ABSTELLRÄUME (GEPÄCK SOLDATEN) ACCESS STORAGE (LUGGAGE SOLDIERS)												
	RAUM FÜR TELEFONE TELEFON ROOM												
	FLUR CORRIDOR												
SPITZB. - UP. ATTIC	SPITZBODEN UPPER ATTIC												

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	SOURCE	B 01
Utilization of floor drains with odor lock which can be completely opened for cleaning purposes.		
Drying of floor drains shall be prevented. Floor drains with lateral supply shall be used for this purpose. See Fig. 10.9.1	B10.9 Page 246	B 02
Floor drain DN 50 shall be installed with a top piece grate size 148x148mm.		
For example make Passavant Kombi odor lock art. no.: 5125.64.81 or equal, all top pieces of material 1.4301 art. no. 5084.89.		B 03
DIN 4109 requirements for increased sound protection and sealing shall be observed at installation of floor drains above and/or in apartments see Fig 07.8.	DIN 4109 Page 83	B 04
A connection piece slope of 3° shall be provided at floor drains in attic. The appropriate ceiling panel shall be exchanged and the connection line installed in ceiling for connection to the downspout.		B 05
Increased sound protection shall be accomplished.	DIN 4109	B 06
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DESIGN GUIDELINES

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SOURCE	
<p>B 10.10 Dismantling work</p> <p>It shall be decided in coordination with the local administration if the entire sanitary installation shall be dismantled.</p> <p>If the installation will be dismantled, work shall be accomplished acc. to following directions.</p> <p>Dismantling of lines located flush mounted. Deviations from this rule shall be coordinated with the local administration upon commencement of design.</p> <p>The scope of installation to be dismantled shall be determined at the site and included. The costs of dismantling shall be included in the cost estimate.</p> <p>Dismantled system parts and operation agents shall be offered to the local administration for reutilization. As far as requirement exists, turn-over shall be accomplished with proof.</p> <p>If no requirement exists, the material shall be transported and disposed acc. to legal regulations.</p> <p>A confirmation concerning the correct disposal shall be requested from the contractor for the disposal of contaminated system parts (insulation, flange sealing etc.).</p>	B 01
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